

Grass Valley/Gold Country Stage TRANSIT CENTER STUDY

Final Report



Prepared for the

Nevada County Transportation Commission

Prepared by

LSC Transportation Consultants, Inc.



September 26, 2007

Grass Valley/Gold Country Stage Transit Transfer Facility Study

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*The preparation of this report has been financed, in part, through a grant from the U.S.
Department of Transportation, Federal Transit Administration, under the authority of 49 USC
Chapter 53 §5305 State Planning and Research Grant, Transit Technical Planning Assistance.*

October 25, 2007

LSC #077110

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Section I

Introduction

Western Nevada County, including Grass Valley, Nevada City and nearby surrounding unincorporated areas, has experienced steady growth in recent years, and is projected to continue this trend. Along with this growth have come increased traffic and transit demand. An important piece in the region's transportation strategy is improvements in the transit transfer/passenger facility serving downtown Grass Valley.

Transit centers are key elements of a successful public transit center, for the following reasons:

- To the *passenger*, the facility is a crucial link in the overall transit trip and optimally should provide easy access, comfort and protection from the elements, a sense of security, pleasant surroundings, and a clear view of the approaching bus. Downtown Grass Valley's transit facility is particularly important, as it is the key transfer point between all of the Gold Country Stage's 11 routes.
- To the *public*, passenger facilities are essential in forming the public perception of the transit program, they are visible "on the street," and part of the community 24/7. As part of the historic downtown core area, the Grass Valley transit center is particularly important in forming this public image of transit. In addition, inadequate transit facilities can result in traffic issues.
- To the *service provider*, facilities can make the boarding and alighting process safer in terms of traffic and passenger safety, and more efficient by speeding passenger boarding through the provision of effective queuing areas, thereby reducing delays getting in and out of traffic.

The existing transfer site provides a poor public image for the transit program, generating operational inefficiencies in transit services, resulting in traffic congestion.

Aware of the importance of the transit center in the public transit program and overall regional transportation strategy, the Nevada County Transportation Commission (NCTC) has retained LSC Transportation Consultants, Inc. and WRNS Studio to prepare a study to evaluate potential sites for a new transit facility for the Gold Country Stage (GCS) service provider. More specifically, this study is intended to identify the program, site, and configuration of a new transit transfer facility that can maximize the effectiveness of the transportation program, provide services and amenities to the riders of the transit service, and serve as a positive element in downtown Grass Valley. This facility is intended to focus on the needs of the transit passengers, and not to serve as the office or maintenance/bus storage facility for Gold Country Stage.

This document provides the NCTC, the City of Grass Valley, and the public with a summary of existing site conditions and program requirements, an evaluation of potential project sites, and the findings of the Consultant Team. The following section presents a review of existing local plans and policies in the downtown Grass Valley study area. Next, a summary of the local transit program and the associated requirements for a transit center are presented. A series of potential transit site options are then presented, along with the advantages and disadvantages of each. Finally, based upon review of this study document and public input, detailed recommendations for the preferred site, program, and general design concepts are presented.

Section II

Existing Setting

This section presents a review of the study area, as well as existing plans and regulations that could direct or impact the provision of a transit center in the study area.

STUDY AREA

Western Nevada County is located in Northern California in the heart of California's Gold Rush country, bounded by Sierra County to the north, Placer County to the south, and Yuba County to the west. This area covers approximately 618 square miles, ranging in elevation from near sea level in the southwest to roughly 5,500 feet at Bowman Lake in the northeast. Three main highways traverse the area, including State Route (SR) 49 running north-south, SR 20 running east west, and SR 174 running between Grass Valley and Colfax, just south of the County border.

The main economic and population centers in western Nevada County consist of Grass Valley and Nevada City, both with rich history reminiscent of the Gold Rush days. Nevada City serves as the County seat and is among two incorporated cities in western Nevada County. Grass Valley, the only other incorporated city in this area, is located approximately four miles southwest of Nevada City. Other important residential areas in the outlying portions of the study area include Lake Wildwood, Penn Valley, Lake of the Pines, Chicago Park, and North San Juan.

With four distinct seasons, western Nevada County is an attractive area to visit and live, including those seeking retirement. This is evidenced by the population increases that have occurred, as well as projected increases. Between 1970 and 1990, the County experienced rapid growth, with the population increasing from 25,346 in 1970 to 78,510 in 1990. While growth between 1990 and 2005 was slow but steady, the U.S. Census Bureau estimated that the 2005 population was 98,394, a 6,361 person or a 6 percent increase from 2000, when the population total was 92,033. The U.S. Census Bureau has projected the Nevada County population to reach 106,910 persons in 2010 and 126,912 persons in 2020. Grass Valley's population of 10,922 in 2000 is forecast to increase to 23,395 in 2020.

Future growth, which will result from proposed annexations and large-scale residential/commercial developments in and around Grass Valley (such as the Loma Rica and Kenny Ranch proposals), will increase the demand for transit services in the area. It is anticipated, due to population changes and economic conditions, many future developments will include low income and senior housing, both of which are considered transit dependent populations and comprise a large portion of the County's total population.

Downtown Grass Valley

Within western Nevada County, downtown Grass Valley is a key center of social, economic, and institutional activity. Retaining much of its Gold Rush heritage, it is a historic district that remains a center for business, the arts, tourism, and civic functions. It is characterized in large part by two- to three-story structures on a dense grid of local commercial streets, well-served by sidewalks. Across the southern portion of Grass Valley, the Golden Center Freeway (SR 20/49) cuts across the study area.

Figure 1 presents this study area, along with key transit trip generators in downtown Grass Valley. Due to the route network characteristics of Gold Country Stage, as well as the benefits of locating the transit center within or near to this key regional activity center, the study area has been defined as that area within a few blocks of the historic district.

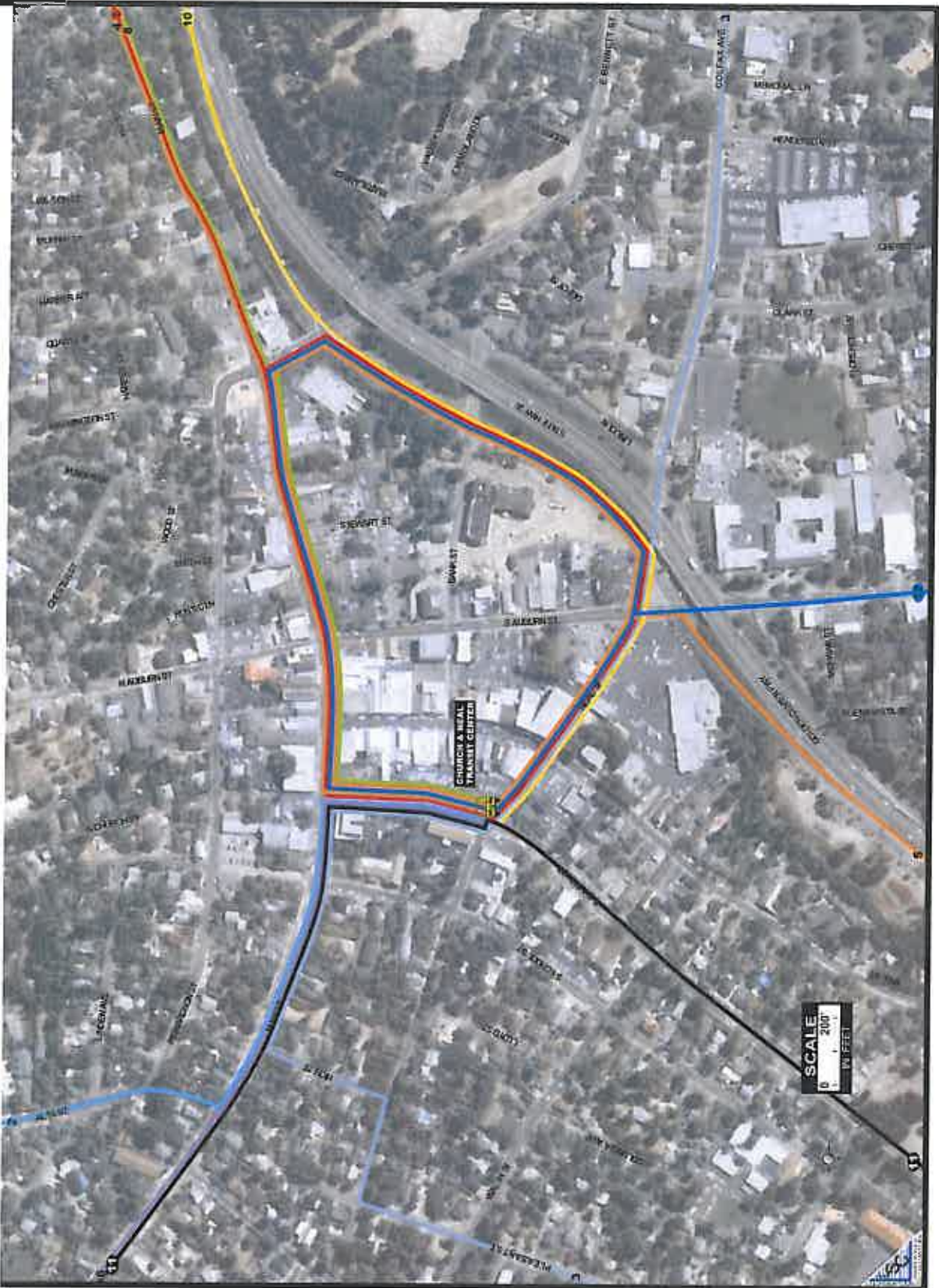
COUNTY PLANS, POLICIES AND REGULATIONS

City General Plan

The following goals and objectives from the Grass Valley General Plan Circulation Element pertain to this project:

- *Provide a circulation system that utilizes a variety of transportation modes, including alternative means of transportation*
- *Ensure that street and roadway improvements complement and support land use goals, objectives, policies and plans*
- *Maintain, improve, and expand the existing circulation and transportation system*
- *Placement of public transportation access at convenient locations*
- *Improvement of the transportation system to facilitate commerce and economic development*
- *Improve public transportation to better line existing and future residential areas with high traffic generating commercial and industrial nodes*
- *Develop plans for shuttle bus service to accommodate intermodal transfer and make transit facilities more convenient*
- *Locate transit stops near freeway interchanges and in conjunction with higher density residential and mixed-use development*
- *Add vehicular parking to downtown*

FIGURE 1



- *Defer to preservation of community character, including historical and architectural features, when planning and implementing transportation improvements*

In addition, the Noise Element includes the following goals, policies and objectives which are related to the project:

- *Coordination of transportation and land use planning to assure acceptable noise levels*
- *Perform adequate acoustical analyses prior to approval of new development projects or transportation facilities, if warranted*
- *Utilize noise contour data to determine land uses affected by transportation related noise sources*
- *Require mitigation of noise created by new transportation noise sources so as not to exceed levels at designated outdoor activity areas and interior spaces of existing noise sensitive land uses*
- *Require acoustical analysis and appropriate mitigation measures where new transportation noise sources are likely to produce noise levels exceeding standards at existing or planned noise sensitive uses*

The following Community Design policies are pertinent to the project:

- *Provide connections for autos, bikes and pedestrians between neighborhoods and commercial districts when neighborhood safety and character are not compromised*
- *Design all future major public and private development projects to include areas for public gathering and interaction*

Nevada County General Plan

The following goals and objectives from the Nevada County General Plan Circulation Element pertain to this project:

- *Consistent with legal and funding constraints, the following shall be emphasized in the County Road Improvement Program . . . projects needed to improve the use of other modes of transportation, including transportation facilities.*
- *Reduce dependence on the automobile*
- *Increase availability of alternate modes of transportation*
- *Provide land use patterns which minimize the need for new roadways and encourage the use of alternate transportation modes*

- *Encourage the development of transit to serve Community Regions by clustering growth to maximize efficiency of the transit system and providing commuter-oriented transit to serve employment centers*

The following land use policies, goals and objectives are pertinent to the transit center project:

- *Future development shall be in accordance with criteria for the following designations:*

Urban High Density Residential – *in locations with a high degree of access to transportation facilities*

Urban Medium Density Residential – *in locations with convenient access to transportation facilities*

Urban Single Family Residential – *community region where a full range of services are present and local access to transportation*

- *Encourage land use patterns which minimize the use of autos and allow for viable alternative transportation modes*
- *Utilize housing densities to encourage the use of alternative transportation modes and increase efficiency of public facilities and services*

The Economic Development Element of the County's General Plan includes the following pertinent policy:

- *Coordinate the County CIP with the economic policy to ensure that public facilities and services are appropriately located and sized, and properly timed to support the desired economic development*

The following relevant policy is found in the Noise Element of the County General Plan:

- *The routing and design of new transportation facilities by the County shall incorporate feasible measures necessary to mitigate increases in noise levels.*

The following Air Quality policy is applicable to the project:

- *The County shall cooperate with all appropriate agencies and other regulatory transportation agencies that include surrounding counties to develop programs designed to maximize the participation of employers in mass transit services for employees and customers.*

Nevada County 2005 Regional Transportation Plan

In January 2006, the County adopted the Nevada County Regional Transportation Plan, which includes specific transportation-related policies and implementation measures and programs. Applicable policies, goals and objectives to this project are outlined below.

- *Transportation facilities should be compatible with adjacent land uses*
- *Create and maintain a comprehensive, multi-modal transportation system to serve the needs of the County*
- *Reduce dependence on the automobile*
- *General public transportation services should be maintained and improved within Grass Valley, and between Grass Valley and Nevada City*

City of Grass Valley Downtown Strategic Plan

The City of Grass Valley prepared a Downtown Strategic Plan, which was adopted in 2003. This plan highlights many issues and assessments, and provides strategies and recommendations in areas that need improvement. Among these recommendations are locations of transit centers and bus stops, primarily in areas labeled as downtown "Sub-areas." The Redevelopment Agency noted the South Auburn Street Area as a prime location for parking over at-grade commercial and transit center, and in Recommendation 7.9 h., stated, "*As part of the overall parking analysis investigate transit funding for a parking structure that contains Transit District offices and a transit hub.*" The location shown on the plan is currently the site of Pioneer Village. Additional streetscape improvements consistent with a transit facility were recommended, including new bus stops, pedestrian scaled street lights, benches and trash receptacles, all to be designed with the historic nature of the downtown in mind.

City of Grass Valley Final Master Street System Plan

The City's *Master Street System Plan* provides recommendations for improvements to the City's transportation system, including transit-related issues. The Plan notes that existing transit riders can experience unreasonably long waits at a transit stop, and that the stops are located far from parking, walking or bike trails, thereby making transit in Grass Valley an unattractive option for many people.

With specific relation to this study, Section H of the Technical Appendices identifies the necessity to move the existing transfer station to better service the overall transportation needs of the community. While a specific site is not identified, the Plan cites the ideal

station location in the South Auburn Street and Colfax Street area, supported by the following reasons:

- The location is adjacent to an existing park and ride lot, which will facilitate the exchange of people from car to bus.
- The frontage road system along the freeway is designed as two-lane one-way streets, providing ideal conditions for dedicated bus turnouts.
- The location is near the freeway, giving buses easy access to and from the system.
- The location is close to schools in the area (school aged residents were noted in the Plan as being frequent riders of the system).
- Since the location is out of downtown, the buses will avoid direct impact to the congested areas. The Plan identifies that the Church and Neal Street transfer point is located in a heavily congested area.

Zoning Code Regulations

The existing Zoning Ordinance for the City of Grass Valley will be replaced by a new Development Code, effective May 10, 2007. Therefore, analysis of the zoning and development regulations for the purposes of this project/study will be based upon the new regulations found in the Development Code. The new Code includes zoning changes in much of the core areas of the City.

The following are summaries of various zoning designations, including parking requirements, which may be applicable to potential transit facility sites:

- **TC, Town Core** – The intent of the Town Core designation is to strengthen the existing and to promote new mixed-use and pedestrian-oriented uses in the core downtown and surrounding area. The surrounding area includes larger, regional commercial districts, with existing uses such as auto-oriented businesses, which are expected to redevelop in the future. Compact development with housing opportunities is encouraged, and walkable and bikeable communities promoted. For projects with more than 3,000 square feet, general parking requirements are set at one space for every 400 square feet, and the development must provide secure bicycle parking.
- **NC, Neighborhood Center** – This zone serves to promote and enhance existing commercial centers and pedestrian-oriented neighborhoods, while creating additional mixed-use centers and promoting mixed-use infill development. The intent is to transform the uniform and nondescript character of commercial corridors into vibrant pedestrian-oriented neighborhoods. If the total square footage is greater than 3,000 square feet, the general parking requirements include one parking space for every 500 square feet, and bicycle parking must be provided in a safe location.

- **NC-Flex, Neighborhood Center Flex** – This zone was developed to promote flexibility with uses, allowing the market and changing character of neighborhoods to determine ground floor uses. The City has identified the South Auburn corridor as a good example of an area appropriate for this designation. General parking requirements (including bicycle) are the same for the NC-Flex zone as for the NC zone.
- **NG-3, Neighborhood General-3** – This zone supports the character of existing neighborhoods and encourages additional housing to be developed. Increased but well designed density that is compatible with the existing neighborhood is promoted. This zone consists of residential uses, and in general, must provide one parking space for every unit, as well as space for bicycles.
- **P, Public** – This zone applies to sites with existing and proposed public uses, including governmental and non-profit community service uses, and is consistent with the Public, Institutional, Non-governmental, School, and Utilities designations in the General Plan. Parking requirements are specific to the use on the site.
- **C-2, Central Business District** – This zone is applied to areas not covered by the new TC designation (see above), and consists of existing auto-oriented development that is expected to remain. The C-2 zone is consistent with the Commercial land use designation in the General Plan. Parking requirements for the C-2 district are dependent upon the specific use of the site.

Historic District Regulations

The downtown Historic District of Grass Valley is comprised of the parcels located on Mill Street, between West Main Street to the north and Neal Street to the south. New development within any Historic District (identified as H - Historical Combining Zones in the Development Code) must be compatible with nearby buildings, the general character of the area within the zone and conformity with the design criteria in the *Design Manual, Downtown Historic Area, Grass Valley, California* (1981). This design manual serves two important purposes: as a written and graphic inventory of existing historic, visual and cultural resources, and to help guide decisions for projects that may affect valued resources during the project development, review and approval process. Discussions throughout the document include detail on historical structure types (residential and commercial), results of the public workshop used to develop design goals, and design criteria, including proportion, spacing, scale, color and materials, to name a few.

Community Design Guidelines

Guidelines can be found in *City of Grass Valley, Community Design Guidelines*, which was adopted in February 2002. This document includes guidelines for commercial, office, industrial, multi-family and "special planning areas." Specific guidelines for each

category (except for the "special planning areas") includes site design, architectural characteristics, streetscape design, circulation, lighting, and signage. Overall, the goal of the guidelines is to preserve and enhance the distinctive character and unique qualities of Grass Valley, ensuring new developments are compatible with the surroundings and overall sense of place.

The following general design principles included in the Community Design Guidelines are applicable to this study:

- *Preserve and enhance the existing Community while encouraging diversity through innovative, unique, and creative design solutions and architectural styles*
- *Assure that new development is sensitive to and strengthens the existing built and natural environment*
- *Create, maintain and enhance civic places through the emphasis of functional relationships and integration of the Community rather than the separation and barriers between adjacent development and uses*
- *Foster development that supports a variety of transportation modes and facilitates pedestrian mobility, convenience and safety*
- *Balance aesthetic and functional considerations of design*
- *Encourage designs, which result in the conservation and preservation of natural resources through the efficient use thereof*

Each chapter includes design goals for the land use specified. The pertinent goals are as follows.

Commercial:

- *To encourage project designs which are attractive and safe for customers*
- *To contribute to creating active gathering places for the community*
- *To promote commercial building architecture reflective of Grass Valley's diversity with attention to detail*

Multi-Family:

- *To contribute to creating a "pedestrian friendly" environment for the community*
- *To encourage design that reflects the quality and character of Grass Valley*

The Commercial Chapter of the guidelines includes a circulation section, the intent of which is improve “walkability” or pedestrian access within the City by “. . . *requiring project designs to incorporate pedestrian and transit linkages with adjacent properties and within the City as a whole, while maintaining and enhancing parking availability.*” This is achieved through guidelines that require the accommodation of other modes of transportation by providing facilities and links needed for pedestrians and bicyclists, and designing projects that provide safe and efficient access for pedestrians to public transportation systems.

The “special planning areas” within the Guidelines include the Downtown Commercial Area, Downtown Residential Area, East Main Street Area, Colfax Avenue Area, Idaho-Maryland Road Area, and the South Auburn Street Area. The guidelines in these sections intend to preserve the historic characteristics of the neighborhoods (where applicable), streetscape design and building character. Of particular interest is the northern section of the South Auburn Street Area, whose guidelines are intended to enhance the existing heavily utilized pedestrian corridor.

EXISTING TRAFFIC CONDITIONS

Critical areas within Grass Valley are predominately located along the Highway 49/20 corridor, and include the Neal Street/South Auburn Street/Colfax Avenue intersection and the frontage road (Tinloy Street) from Bennett Street to Colfax Avenue. In 2004, the City of Grass Valley prepared a Draft Corridor Improvement Project focusing on this area, which presented existing traffic conditions at the PM peak hour at key areas along the corridor. According to this study, existing Levels of Service (LOS) at the Neal Street/South Auburn Street/Colfax Avenue intersection are at an LOS E (averaging between 55 and 80 seconds of delay per vehicle), which can be attributed to the triangle configuration of these streets and minimal space between the signals, which results in poor synchronization. This intersection, known as “Devil’s Triangle,” experiences the greatest number of traffic accidents in the City. The intersection at Bennett Street and Tinloy Street currently operates at LOS E as well, due to the heavy traffic volume coming off the highway and the existing traffic control, and the fact that stop signs are only located at the off ramp, causing traffic queue issues. However, the LOS at the Tinloy Street/Bank Street currently operates at an LOS A, as does the Hansen Avenue/Bank Street intersection on the south side of the Golden Center Freeway.

The Master Street System Plan (October 2004) provides additional information with respect to key intersections and corridors within the City. Table 1 presents a summary of the LOS for intersections in and around the downtown core.

TABLE 1: Key Intersection Level of Service			
Street	Corridor	# of Lanes	LOS
<i>Mill Street</i>	West Main to McCourtney Road	2 lanes	LOS C to E, with LOS E at W. Main Street
<i>W. Main Street</i>	Ridge Road to Dorsey Drive	2-3 lanes	LOS A to F, with LOS F at Idaho Maryland Road
<i>Neal Street</i>	S. Auburn Street to Mill Street	2 lanes	LOS C to E, with LOS E at S. Auburn Street
<i>E. Bennett Street</i>	E. Main Street to Brunswick Road	2 lanes	LOS B to D, with LOS D at SR 20/49 ramps
<i>S. Auburn Street</i>	McKnight Way and Main Street	2 lanes	LOS A to E, with LOS E at Neal/Colfax/Frontage (Tinloy Street

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Section III

Existing Transit Services

EXISTING TRANSIT SERVICES

Western Nevada County transit services are provided through a joint powers agreement executed on May 5, 1980, between Nevada County, the City of Grass Valley, and Nevada City. The Nevada County Transit Services Division (TSD) is responsible for the oversight of the two public transit systems operating in western Nevada County, and reports to the seven-member Operations Policy Committee (OPC), made up of members of the Nevada County Transportation Commission (NCTC). The TSD operates one of the transit programs and contracts with Gold Country Telecare, Inc. for the other program. The two programs are:

- Gold Country Stage (GCS), a fixed route program operated directly by the TSD using County employees.
- Gold Country Telecare, Inc. ("Telecare"), a private nonprofit agency that provides door-to-door demand response services under contract to the TSD.

Both GCS and Telecare have existing operations and maintenance facilities. The GCS/TSD operates out of the Nevada County Airport, located in eastern Grass Valley. Telecare leases a facility in Cedar Ridge to accommodate all transit administrative and operations functions, including a dispatch center, driver training room, bus parking lot, and a computerized dispatching program to assist in scheduling rides and maintaining data.

TRANSPORTATION SERVICES

The Gold Country Stage is a fixed-route transit program that connects population, commercial and employment centers throughout western Nevada County. GCS operates 11 routes that serve the Nevada City/Grass Valley area, unincorporated western Nevada County, and along the SR 49 corridor between Auburn and Nevada City, as well as the SR 174 corridor between Grass Valley and Colfax. Two transfer points currently exist in the service area: at the National Hotel on Broad Street in Nevada City (providing an opportunity to transfer between three routes), and at the intersection of Church and Neal Streets in Grass Valley (providing transfer opportunities between all 11 routes). Over the course of the routes, GCS buses pick up and drop off passengers at signed bus stops in the "urban" areas, though flag-stops are allowed in rural areas. Service is provided on weekdays from 5:50 AM to 9:55 PM, on Saturdays, Sundays and Holidays (depending on the route) from 7:20 AM to 9:05 PM.

The GCS routes are described below.

- **Route 1: Nevada City** route originates in downtown Grass Valley at the Church and Neal Street transfer center and at the County Government Center in Nevada City. Major stops include the Hills Flat area, Fowler Center, Seven Hills Business District, Nevada City transfer point, downtown Nevada City and the Eric Rood Government Center. Two buses are operated simultaneously throughout most of the day, providing service every 30 minutes from 7:30 AM to 5:00 PM. Weekday buses continue to run hourly from 5:00 PM to 9:00 PM. Saturday service is provided on an hourly basis from 8:00 AM to 4:00 PM.
- **Route 2: Ridge Road** operates service between Grass Valley and Nevada City via Ridge Road with service originating at the Church and Neal Streets transfer center and the National Hotel transfer point. Hourly service is provided Monday through Friday from 7:10 AM to 5:10 PM in the northbound direction and from 7:35 AM to 5:35 PM in the southbound direction. Saturday service is provided from 8:10 AM to 4:10 PM on northbound buses and 8:35 AM to 4:35 PM on southbound buses. When the route arrives at the transfer point in Grass Valley, it is heading in the southbound direction on Church Street, thereby stopping across the street from the transfer point on the southwest corner of the intersection. Passengers waiting for Route 11, a continuation of Route 2, are picked up here rather than at the transfer point. Major stops along this route include downtown Grass Valley, Sierra College, Nevada Union High School, the Seven Hills area, Pioneer Park, and downtown Nevada City.
- **Route 3: Grass Valley Loop** commences and terminates at the Church and Neal Street transfer point in Grass Valley. This route serves the lower Grass Valley area every 30 minutes from 7:00 AM to 6:00 PM Monday through Friday, and from 8:00 AM to 4:00 PM on weekends. Additionally, the route services Bitney Springs High School in the morning and afternoon only. Major stops include downtown Grass Valley, Condon Park, Nevada County Fairgrounds, Gold Country Senior Center, Bitney Springs High School, Pine Creek Shopping Center, Sierra Foothills High School, Memorial Park, and Safeway.
- **Route 4: Brunswick Basin** route operates service between Grass Valley and Nevada City, with service originating at the Church Street and Neal Street transfer point and the Fowler Center in Nevada City. Hourly service is provided at these points Monday through Friday hourly from 8:10 AM to 5:10 AM in the northbound direction and from 7:44 AM to 5:44 PM in the southbound direction. Saturday service is provided on northbound routes from 8:10 AM to 4:10 PM, and on southbound routes from 8:44 AM to 4:44 PM. Along this route, major stops include downtown Grass Valley, Safeway, Sierra Nevada College, Sierra Nevada Memorial Hospital, Glenbrook Shopping Center, Gold Country Shopping Center, and the Fowler Center.

- **Route 5: Auburn** route provides intercity service between Nevada City, Grass Valley and Auburn via SR 49. Route 5 makes six trips per day, Monday through Friday, running in the southbound direction from 6:00 AM to 5:00 PM and in the northbound direction from 7:00 AM to 6:00 PM. On Saturdays, this route runs southbound from 8:00 AM to 3:00 PM and northbound from 9:00 AM to 4:00 PM. Major stops along this route include downtown Grass Valley, Alta Sierra, Lake of the Pines, Higgins Village, Lake Center, Rock Creek Center, Auburn Village, and the Amtrak Depot.
- **Route 5X: Highway 49 Express** is a newly-implemented route that runs weekdays, Saturday, Sunday, and holidays between Grass Valley and the Auburn Amtrak Depot via SR 49, with no stops on the route. On weekdays, the bus originates from the Church Street and Neal Street transfer point in Grass Valley from 5:55 AM to 5:55 PM in the southbound direction. However, on weekdays there is one bus that departs from Sacramento Street and Adams Street in Nevada City at 5:40 AM. In the northbound direction, buses depart the Auburn Amtrak Depot from 6:30 AM to 6:31 PM. The last northbound bus services Nevada City at Sacramento Street and Adams Streets. Saturday service is provided from the Church Street and Neal Street transfer point to the Auburn Amtrak Depot at 7:20 AM, 5:55 PM and 7:55 PM in the southbound direction, and at 8:00 AM, 6:30 PM and 8:30 PM in the northbound direction. Sunday and holiday service also runs from the Grass Valley transfer point to the Amtrak Depot in Auburn, from 7:20 AM to 7:55 PM in the southbound direction and from 8:00 AM to 8:30 PM in the northbound direction.
- **Route 6: Penn Valley** route originates from the Church and Neal Streets transfer point in Grass Valley and serves the Rough and Ready and Penn Valley communities towards the west via the Rough and Ready Highway. The route ends at Wildwood Center in Penn Valley and returns to Grass Valley where, at the transfer point, the route continues on as Route 8 towards Loma Rica. Service is provided weekdays in the westbound direction from 8:00 AM to 5:30 PM and in the eastbound direction from 7:00 AM to 4:30 PM. Saturday service is provided from 8:00 AM to 4:00 PM in the westbound direction and from 8:30 AM to 4:30 PM in the eastbound direction. Major stops along this route include the Lyman Gilmore School, Rough and Ready, and the Wildwood Center.
- **Route 8: Loma Rica** route is an extension of Route 6, providing service in the eastern area of Grass Valley towards Loma Rica. Service is run westbound, departing from Church and Neal Streets, from 7:30 AM to 5:00 PM, and in the eastbound direction, departing from the Nevada County Airport and GCS office, from 7:43 AM to 3:43 PM. Saturday service is provided five times per day, departing Grass Valley between 9:00 AM and 3:15 PM, and from the County Airport between 9:28 AM and 3:43 PM. Major stops include PRIDE, Crown Point Circle, Nevada County Airport, and the GCS offices.

- **Route 10: North San Juan** provides service between Grass Valley and the San Juan and North Columbia communities to the north via SR 49. This route is only operated on the weekdays and runs four times daily from 6:30 AM to 5:00 PM in the northbound direction (departing from Church and Neal Streets in Grass Valley) and from 7:25 AM to 5:55 PM in the southbound direction (departing from North Columbia Community Center). Upon returning to the Church and Neal Street transfer point in Grass Valley, the buses continue on to Route 12, serving the Colfax area. Major stops along Route 10 include downtown Nevada City, the County Government Center, South Yuba River Bridge, North San Juan Post Office, and the North Columbia Community Center.
- **Route 11: Squirrel Creek Loop** begins and ends at the Church and Neal Streets transfer point, where the buses continue onto Route 2. Service is provided hourly on weekdays from 6:55 AM to 5:55 PM and on Saturdays from 7:55 AM to 4:55 PM. Route 11 is a continuation of Route 2, which stops at the southwest corner of the Church Street and Neal Street intersection; passengers are picked up at this point to travel on Route 11. Major stops on this route include downtown Grass Valley, Condon Park, and Lyman Gilmore School.
- **Route 12: Colfax** provides three daily weekday trips from Grass Valley to Colfax along the SR 174 corridor. Upon returning to the Church and Neal Streets transfer point, the buses continue onto Route 10. From Grass Valley, the route departs at 8:20 AM, 11:30 AM and 3:40 PM. This route makes stops at Union Hill School, Cedar Ridge Store, Chicago Park Store, Colfax Amtrak station, and Colfax Greyhound station.

In addition to the fixed-route system provided by GCS, the County operates a nonprofit system, Gold Country Telecare, which receives funding help from the United Way of Nevada County and Area 4 Agency on Aging. Telecare has over 25 years of experience in the provision of public transportation services, providing door-to-door demand response service in western Nevada County under contract with the Nevada County Transit Service Division. Telecare provides demand response service on weekdays (Monday through Friday from 7:00 AM to 6:30 PM) to seniors aged 60 and older, and to physically and developmentally disabled persons. Common trips include those to the Senior Center for meals and enrichment programs, medical appointments, and shopping. Out-of-county trips for medical appointments are also provided and operated exclusively by volunteer drivers. Saturday service is provided to ADA qualified persons from 8:00 AM to 5:00 PM, and Sunday service is available for seniors over the age of 60 years old from 8:00 AM to 2:00 PM. For non-subscription trips, customers are asked to call at least one day in advance of their desired trip, up to 14 days in advance.

Within western Nevada County, there are no other forms of public transportation available. However there are connections to both Amtrak and Greyhound stations in nearby cities, including Colfax and Auburn. The Greyhound service in Colfax serves the Interstate 80 corridor, with the station located at the Standlock Bottle Shop (320 Canyon Way). GCS stage Route 12 provides Nevada County residents with connection

to this station. An Amtrak Thruway feeder bus previously served Nevada City, transporting passengers to the rail station in Auburn. GCS Route 5X eliminated the need for the Thruway bus and now carry Amtrak passengers directly to the station in Auburn. Additional service outside of Grass Valley and western Nevada County is provided by GCS Route 12, which provides service to the Colfax Amtrak station.

Gold Country Stage currently provides direct connections to neighboring area transportation services, including the following:

- **Auburn Transit** – Direct connections are made between GCS and Auburn transit via GCS Route 5 and 5X at the Auburn Station on Nevada Street. Auburn Transit operates two bus routes, the Red Route and the Blue Route, roughly between 6:00 AM and 5:00 PM, Monday through Friday. Saturday service is provided with one route from 9:00 AM to 5:00 PM.
- **Placer County Transit** – GCS Routes 5 and 5X provide connections to Placer County Transit at the Auburn Station on Nevada Street. In general, Placer County Transit operates between approximately 4:40 AM and 9:00 PM, depending on the route.

Typical Buses

Gold Country Stage currently operates 15 minibuses and 6 support vehicles. Seating capacities include 15 passengers (7 buses), 16 passengers (1 bus), 20 passengers (3 buses), 22 passengers (2 buses), and 27 passengers (2 buses), with vehicle lengths ranging from 23 to 29 feet. The entire fleet is wheelchair accessible and equipped with bicycle racks.

Telecare operates a total of 17 vans and 1 support vehicle. Of these 17 revenue vehicles, 8 are owned by Nevada County and provided to Telecare as part of the operating contract for paratransit services. The entire operating fleet is wheelchair accessible.

TRANSIT OPERATING STATISTICS

Existing Ridership

Ridership on Gold Country Stage has grown substantially over recent years. From a FY 1994/95 total of 178,076 passenger-trips, ridership grew 38 percent to a FY2004/05 total of 245,881, and an additional 13.5 percent in FY2005/06 (to 284,428 annual boardings). To date in FY 2006/07, data indicates that ridership has continued to increase by approximately 5.8 percent compared to FY2005/06. Overall, GCS ridership has grown by approximately a full 66 percent since 1994/95.

Table 2 shows ridership for each route for FY2006/07 to date. This year's data shows that Route 1 has the highest ridership to date, with 80,208 passenger boardings between July 2006 and February 2007, followed by Route 3 with 52,112 passenger

Table 2: Monthly Passenger Boardings by Route, FY06/07

	Route 1	Route 2	Route 3	Route 4	Route 5	Route 5x	Route 6	Route 8	Route 10	Route 11	Route 12	Total
July	6,515	1,663	4,301	4,385	2,235	476	941	653	77	596	23	21,865
August	7,628	1,918	5,067	5,098	2,382	608	1,213	820	155	681	76	25,646
September	7,605	1,891	5,247	4,369	2,111	522	949	745	374	551	147	24,511
October	8,738	1,803	5,303	4,263	2,177	626	1,140	863	480	665	196	26,254
November	8,427	1,817	5,391	3,856	1,908	441	1,035	773	520	626	243	25,037
December	8,049	1,636	5,484	3,559	1,757	403	1,013	790	446	445	218	23,800
January	9,018	1,996	5,467	3,832	2,011	438	1,224	918	451	616	201	26,172
February	8,137	1,823	5,173	3,549	1,770	336	1,063	856	430	525	189	23,851
March	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
April	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
May	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
June	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL	64,117	14,547	41,433	32,911	16,351	3,850	8,578	6,418	2,933	4,705	1,293	197,136

boardings and Route 4 with 42,496 passenger boardings. These three routes serve areas of western Nevada County that contain the most popular services, including the senior center, various shopping centers, social services, hospitals and Nevada City. Route 12, which runs from Grass Valley to Colfax via Hwy 174, has the lowest ridership to date, with 1,378 passenger boardings. Route 10, which runs to North San Juan, and Route 5X, the express bus with limited service on weekdays and weekends to Auburn, had lower ridership as well, with 3,214 and 4,888 passenger boardings to date, respectively.

Existing Transit Activity Patterns

Table 3 presents a summary of departures from the existing transit transfer station at the corner of Church Street and Neal Street in each 15-minute period, based on the current schedule. As shown, a total of 120 bus departures occur over the course of the day, starting at 5:45 AM and ending at 9:00 PM. In the peak hour (roughly 4:30 PM to 5:30 PM), a total of 10 bus departures occur.

Throughout the day, multiple buses (between two and four buses) are scheduled to be at the transfer station at exactly the same time (overall, a total of 23 different times). For example, Routes 1, 2, 3 and 8 arrive at the same time four times per day (7:55 AM, 11:55 AM, 2:55 PM, and 3:55 PM). In addition, there are a number of periods throughout the day when buses arrive within minutes of each other, most with identical departure times. As an example, between 4:50 PM and 4:58 PM Routes 1, 2, 3, 5, 6 and 12 arrive at the transfer station, and all but one route departs at 5:00 PM (Route 2 arrives and departs at 4:55 PM). Therefore, there can be up to a maximum of 5 buses waiting at this location at the same time. Because the existing transfer station is located at a busy corner in Grass Valley's downtown, these exact or near exact arrival and departure times occasionally create traffic problems in an already congested area, including delays to both buses and general traffic.

Passenger Survey

On Tuesday, April 10, 2007 a survey of Gold Country Stage riders was conducted at the existing transfer point at Church Street and Neal Street from 10:00 AM to 2:00 PM. A total of 38 riders completed the survey, which asked the purpose of their trip, what amenities and services are desired at a new transfer point, and what should be considered when choosing a location. Riders were also asked to rank the importance of several issues when planning the facility, including safety and security, accessibility to local services, shelter from the elements, improved transit operations and aesthetics.

When asked what the purpose of their trip was, on an individual basis, "other" received the most responses (18 responses), which included doctor appointments, visiting friends or family, and visiting Grass Valley for pleasure. This was followed closely by "work" (12 responses), "home" (10 respondents) and "shopping" (9 responses), while "restaurant" received 7 responses, and "school" received 4 responses. It is important to

Table 3: Weekday Bus Activity at Church & Neal Transfer Center

Number of Departures

 = Peak Hour of Activity

15-Minute Time Period		Number of Buses at Church & Neal by Route												Period
Starting	Ending	1	2	3	4	5	5x	6	8	10	11	12	Total	
5:45 AM	5:59 AM	0	0	0	0	0	1	0	0	0	0	0	1	
6:00 AM	6:14 AM	1	0	0	0	1	0	0	0	0	0	0	2	
6:15 AM	6:29 AM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	6:44 AM	0	0	0	0	0	0	0	0	1	0	0	1	
6:45 AM	6:59 AM	0	0	0	0	0	0	0	0	0	1	0	1	
7:00 AM	7:14 AM	1	1	1	1	0	1	0	0	0	0	0	5	
7:15 AM	7:29 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	7:44 AM	1	0	1	0	0	0	0	1	0	0	0	3	
7:45 AM	7:59 AM	0	0	0	0	0	0	0	0	0	1	0	1	
8:00 AM	8:14 AM	1	1	1	1	1	0	1	0	0	0	0	6	
8:15 AM	8:29 AM	0	0	0	0	0	0	0	0	0	0	1	1	
8:30 AM	8:44 AM	1	0	1	0	0	0	0	0	0	0	0	2	
8:45 AM	8:59 AM	0	0	0	0	0	0	0	0	0	1	0	1	
9:00 AM	9:14 AM	1	1	1	1	0	0	0	1	0	0	0	5	
9:15 AM	9:29 AM	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	9:44 AM	1	0	1	0	0	0	0	0	1	0	0	3	
9:45 AM	9:59 AM	0	0	0	0	0	0	1	0	0	1	0	2	
10:00 AM	10:14 AM	1	1	1	1	1	0	0	1	0	0	0	6	
10:15 AM	10:29 AM	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 AM	10:44 AM	1	0	1	0	0	0	0	0	0	0	0	2	
10:45 AM	10:59 AM	0	0	0	0	0	0	0	1	0	1	0	2	
11:00 AM	11:14 AM	1	1	1	1	0	0	0	0	0	0	0	4	
11:15 AM	11:29 AM	0	0	0	0	0	0	1	0	0	0	0	1	
11:30 AM	11:44 AM	1	0	1	0	0	0	0	1	0	0	1	4	
11:45 AM	11:59 AM	0	0	0	0	0	0	0	0	0	1	0	1	
12:00 PM	12:14 PM	1	1	1	1	0	0	0	0	0	0	0	4	
12:15 PM	12:29 PM	0	0	0	0	0	0	0	1	0	0	0	1	
12:30 PM	12:44 PM	1	0	1	0	0	0	0	0	0	0	0	2	
12:45 PM	12:59 PM	0	0	0	0	0	0	1	0	0	1	0	2	
1:00 PM	1:14 PM	1	1	1	1	1	0	0	1	0	0	0	6	
1:15 PM	1:29 PM	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 PM	1:44 PM	1	0	1	0	0	0	0	0	0	0	0	2	
1:45 PM	1:59 PM	0	0	0	0	0	0	0	1	1	1	0	3	
2:00 PM	2:14 PM	1	1	1	1	0	0	0	0	0	0	0	4	
2:15 PM	2:29 PM	0	0	0	0	0	0	1	0	0	0	0	1	
2:30 PM	2:44 PM	1	0	1	0	0	0	0	1	0	0	0	3	
2:45 PM	2:59 PM	0	0	0	0	0	0	0	0	0	1	0	1	
3:00 PM	3:14 PM	1	1	1	1	1	0	0	0	0	0	0	5	
3:15 PM	3:29 PM	0	0	0	0	0	0	0	1	0	0	0	1	
3:30 PM	3:44 PM	1	0	1	0	0	0	0	0	0	0	1	3	
3:45 PM	3:59 PM	0	0	0	0	0	0	0	0	0	1	0	1	
4:00 PM	4:14 PM	1	1	1	1	0	0	1	0	0	0	0	5	
4:15 PM	4:29 PM	0	0	0	0	0	1	0	0	0	0	0	1	
4:30 PM	4:44 PM	1	0	1	0	0	0	0	0	0	0	0	2	
4:45 PM	4:59 PM	0	0	0	0	0	0	0	0	0	1	0	1	
5:00 PM	5:14 PM	1	1	1	1	1	0	0	1	1	0	0	7	
5:15 PM	5:29 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	5:44 PM	0	0	1	0	0	2	1	0	0	0	0	4	
5:45 PM	5:59 PM	0	0	0	0	0	0	0	0	0	1	0	1	
6:00 PM	6:14 PM	1	0	1	0	0	0	0	0	0	0	0	2	
6:15 PM	6:29 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 PM	6:44 PM	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 PM	6:59 PM	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 PM	7:14 PM	1	0	0	0	0	1	0	0	0	0	0	2	
7:15 PM	7:29 PM	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 PM	7:44 PM	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 PM	7:59 PM	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM	8:14 PM	1	0	0	0	0	0	0	0	0	0	0	1	
8:15 PM	8:29 PM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 PM	8:44 PM	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 PM	8:59 PM	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 PM	9:14 PM	1	0	0	0	0	0	0	0	0	0	0	1	
Total Weekday Daily		26	11	23	11	6	6	7	11	4	12	3	120	
Total in Peak Hour		2	1	2	1	1	0	0	1	1	1	0	10	

note that many of the trips serve multiple purposes for the riders, with the most common response for combined trips being work and shopping.

The riders were also asked what amenities and services were most desired for a new transit center. As shown in Figure 2, the most popular amenities or services were public restrooms (30 responses), benches (27 responses), drinking fountains (24 responses), and indoor waiting areas (19 responses). Lighting features (13 responses), bike racks (9 responses), information kiosks (8 responses) and parking (7 responses) were considered to be moderately important features, while electronic pass sales and landscaping received the fewest responses, with 6 responses and 2 responses, respectively.

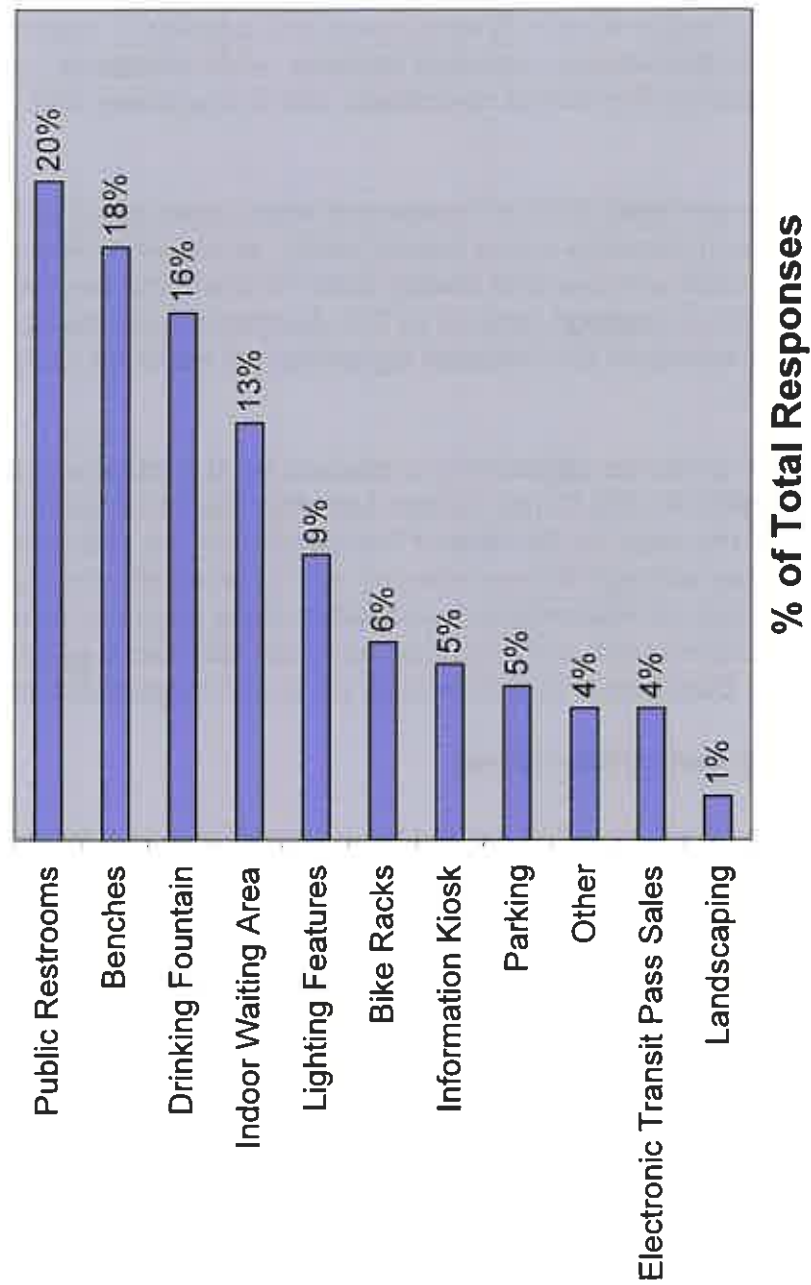
The survey also provided a list of issues and riders were asked to rank them based on their importance in planning a new transit facility, as shown in Figure 3. Riders felt that accessibility to local services and shelter from the elements was the most important issues, each with an average ranking of 3.6. Aesthetics was the next most important, with an overall ranking of 3.5, followed by safety and securing (3.3) and improved transit operations (3.1).

The riders were given the opportunity to discuss what should be considered when choosing a location for the transit center. Locating the transit center in a central location was mentioned the most by the riders (7 respondents), as well as locating the center in an area with easy walking (5 respondents), with accessibility for disabled or handicapped riders (3 respondents), and within close proximity to the downtown (2 respondents). Some riders also provided more specific site suggestions, including City Hall, Brunswick Basin area, in a downtown park, and maintaining the current site.

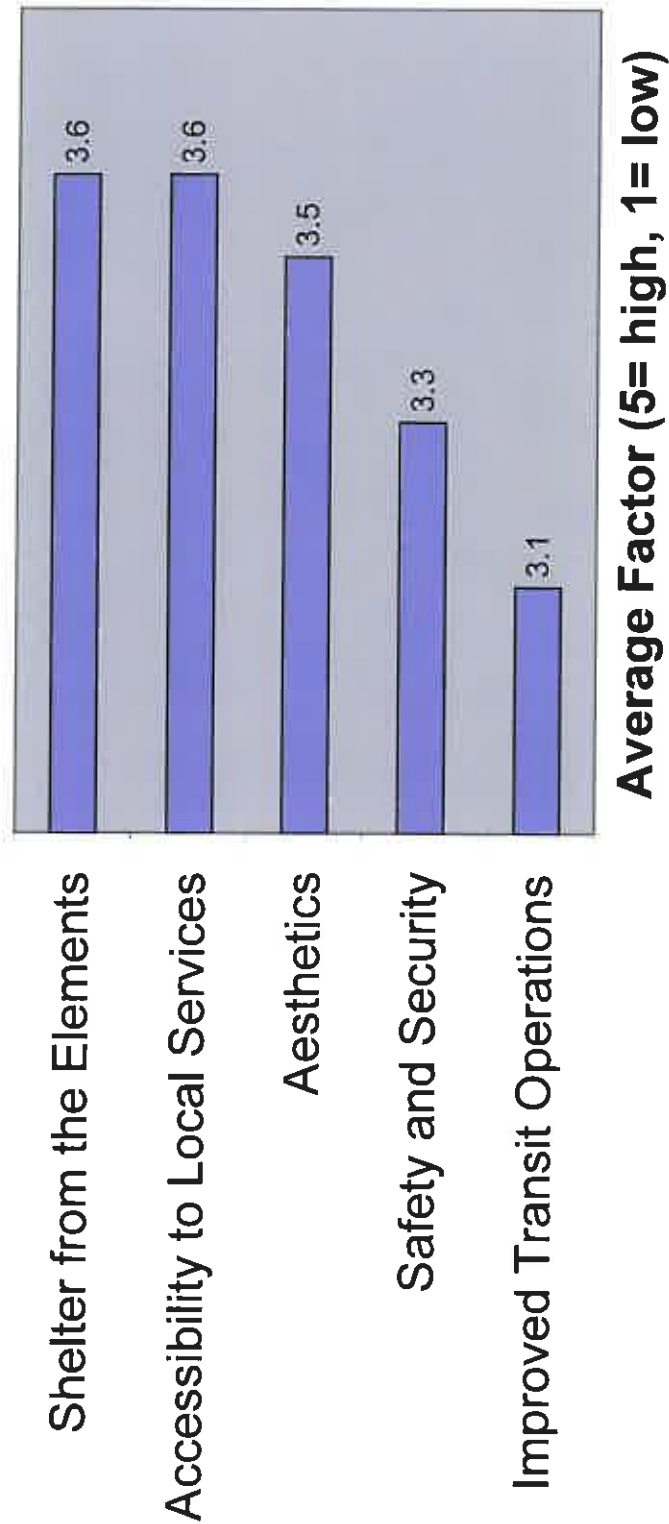
Study Steering Committee Survey

A similar survey which included the potential amenities was administered to the Study Steering Committee. Of highest importance to the Committee was providing driver restrooms and ensuring ADA accessibility at the center. Other high-priority features included providing bicycle racks or lockers, ensuring safety and security through adequate lighting and landscaping, providing ample benches for waiting passengers, parking spaces on-site for GCS employees, and providing shelter from the elements. While some respondents felt that public restrooms would be beneficial, others felt that this would become a liability and that driver restrooms could provide access for disabled riders, when needed.

**FIGURE 2: GCS Passenger Survey Results
Desired Transit Center Amenities**



**FIGURE 3: GCS Passenger Survey Results
Transit Center Location Factors**



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